

*Navigating the Boundaries of the Visible and Invisible:  
An Exploration and Reframing of the Intersection of Science and Religion*

**An Honors Thesis (HONR 499)**

**by**

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## Abstract

A popular inclination into which we are all too prone to slip is the notion that science and religion are fundamentally and necessarily at odds. Recent developments have given credence to this inclination, as members of anti-scientific religious and atheistic scientific camps continue to decry each other as the world's departure from the true approach to reality. Despite the depth of the inculcation of this exclusionist paradigm, it is a relatively new phenomenon that is difficult to locate with significant prevalence before the European Enlightenment. This paper presents an overview of the histories of science, religion, and their competition that show the any antagonism observed in either or both discipline is the result of undue distortions meant to garner hegemonic power over Europe and America. It then responds to these innovations by recasting science and religion into their respective appropriate domains, concluding that when this is done the two are entirely intellectually compatible.

## Acknowledgments

A paper of this kind is rarely the work of a single contributor, and although I am the sole author of this particular essay, a number of individuals have made very important contributions which necessitate acknowledgment. Among them are my thesis advisor, Dr. Timothy Berg, who provided me with frequent and crucial insight throughout the course of my research and composition, and who is to be credited with my decision to not drop out of the Honors College; my brother, Cameron Orr, who provided thorough, critical and constructive criticism on the initial draft of my thesis; my parents, Diann Nichols, Michael Nichols and Michael Orr, and my dear friend Bailey Cline, all of whom provided additional feedback on my writing before the first draft was complete; my eighth-grade science teacher, Matthew Allen, a Christian who introduced me to the idea that science and Christianity could be compatible; and the Religious Studies faculty of Ball State University, who have instructed and mentored me for six semesters, namely Dr. Elizabeth Agnew, Dr. Jeffrey Brackett, Dr. Matthew Hotham and Dr. Joseph Marchel.

Highest thanks go to the God I serve and to Whom I owe my life. Without His constant, unmerited, gracious provision and sustenance, none of this would be possible. Accordingly, I affirm and declare, along with my *adelphoi* and with the congregations of heaven:

*Soli Deo Gloria*

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## Process Analysis Statement

Although I began formal research for this short paper only two months before beginning composition, I have been ruminating on many of the ideas expressed in it for roughly a decade. I was raised to believe that my devoutly Christian paradigm precluded the acceptance of select scientific propositions, particularly biological evolution and the multi-billion year ages of the earth and the universe. The older I grew, the more I came to understand and respect science. Yet not for a moment did it occur to me that my acceptance of scientific facts could in any way invalidate my religious inclinations – nor could the opposite take place. Instead, I consumed and produced, with increasing vigor and savvy, myriad apologies, theodicies and rhetorical strategies to refute claims of systemic or particular conflict and advance arguments for compatibility.

Therefore, by the time I began the project I was already fairly critical of attempts to render the two intellectually incompatible. This may suggest a degree of bias on my part, though I believe this bias is neither necessary nor real. For one thing, I find my arguments to be fairly sound, and reasonable enough to stand against scrutiny in spite of any amount of prejudice on the part of their originator; for another, no research is begun without the proposition of a hypothesis, which, in this case, is that science and religion cannot be rendered rationally incompatible – a hypothesis that was confirmed by my body of texts and reasoning.

Accordingly, the process by which I produced this paper began with a collection and examination of relevant elements of this study – namely, of the essence and development of science, religion, arguments for their incompatibility and for their compatibility. Admittedly, my time constraint (I devoted six weeks to research) necessitated limited research, and therefore I take certain things for granted, most critically that a popular understanding of conflict between the two exists at all. Because this seems obvious to me, I do not take great time to prove its

existence – a failure that does not significantly detract from my complementarian argument, and that will presumably be resolved if I revisit and expand upon this enterprise in the future.

Alternatively, I chose to focus on tracking the historical development of relevant ideas, and examining arguments in support and in opposition to my hypothesis.

Initially, I worried that the inclusion of an entire chapter on history would be tangential to my thesis. However, it soon became clear that tracing these histories was vital, for two reasons: they demonstrate that **1)** our modern, popular understanding that science and religion are not compatible originated in Europe and was spread throughout the world through Colonialism, and **2)** the ways in which science and religion are understood are fluid and vary appreciably across cultures, making it fallacious to situate their exact meanings solely in decidedly Eurocentric paradigms. This was enough to substantiate my claim that the question of compatibility should be reopened, which I do in the following chapter where I show that the two cannot be construed as incompatible. While this had been my own interpretation for years by the time I began writing this essay, my research provided me with concrete and compelling arguments which I could not articulate well a few months ago.

While research was an invaluable component of this project, I never considered it a mere research paper that collects and presents objective data, but a rhetorical statement of my philosophical position on this issue, supported by what I find to be convincing evidence. The interjections of my own conclusions – my subjective interpretation of objective data – should neither surprise nor trouble the reader. I encourage the reader to view this thesis as I do: a contribution to an ongoing conversation on how to look at and treat epistemological and scientific claims. It is my fondest hope that the reader is deeply intrigued by this short treatise and is prompted to engage further with the relationship of science and religion, as I have been.

## I. Introduction

*Jesus answered, “You say that I am a king. In fact, the reason I was born and came into the world is to testify to the truth. Everyone on the side of truth listens to me.”*

*“What is truth?” retorted Pilate.*

– John 18:37-38, New International Version

What is truth? This was the response of the Roman Governor, Pontius Pilate, to Jesus of Nazareth’s self-designation as the authority on truth, according to the account of Jesus’ Roman trial recorded in the Gospel of John. Positing this question is a fitting way to open this essay given that it, at its heart, concerns what information can be properly known to be true. The rise and pervasiveness of such phenomena as individualism, relativism and the so-called “fake news” makes it difficult to establish any concrete notion of reality. In an age where humanity has attained greater quantities of and access to information than ever before, we seem to be just as uncertain about the real nature of our lived experience as we have ever been, if not more so.

Of course, a sense of uncertainty is not a novel condition for humanity, but one that has plagued us as long as we can remember. The inherent entropy of nature means that we have we can never know what to expect at any given moment, and therefore have no way to anticipate and prepare for future events that may bear significant weight on our chances of survival. We are perpetually “flying blindly,” so to speak. It is only natural, then, for humans to seek means of bringing their lived realities to order. If we can successfully define the nature and operation of our world, the depth of our inherent uncertainty is diminished and we are better equipped to endure the vicissitudes of existence.

Archaeological and historical evidence demonstrates that the ancients were feverishly curious people. Thousands of years before the common era antiquity’s great civilizations – India,

Egypt, China and Mesopotamia – were discovering, documenting and utilizing mathematics, astronomy, cartography and communication, often with incredible accuracy.<sup>1</sup> Obviously, these activities were not merely avocational frivolities or accidental encounters. The collection of knowledge was and continues to be an intentional undertaking designed to retrench treacherous uncertainty, and all the hazards therein. In addition to the aforementioned list of the engagements of ancient peoples – what I have listed is, at best, a tiny sampling – is the development of various phenomena that, today, would be classified as religion. The ancients were, universally, quite caught up in spiritual and supernatural activity. Conspicuously, they often failed to distinguish between the natural and the supernatural. Celestial bodies were simultaneously observable, quantifiable objects and deities; geological and astronomical events were understood as both naturally and divinely originated; Pythagoras’ scrupulous and accurate study of mathematics, music and astronomy led him to such supernatural conclusions that Shepherd refers to his resulting philosophy as “religion” and his students as “devotees.”<sup>2</sup>

Humanity once acknowledged a compatibility, sometimes a simultaneity, between the disciplines we now term “science” and “religion.” However, in recent centuries this relationship has progressively unraveled up to the present. Today, the prevailing opinion is that religion and science are not only categorically distinct but also diametrically and irreconcilably opposed. New-age atheists like Dawkins, Harris and Hitchens violently decry any sort of religious claim or activity as outmoded and worthless fiction, while ultra-conservative religious leaders of all stripes reject the legitimacy of a number of demonstrable scientific facts, like evolution and the age of the universe. Of course, it would be narrow-minded to claim that these extreme positions are the only two available. Yet, it is undeniable that the loudest voices in this discussion are consistently those that occupy the extremes.

More troubling, the false dilemma that one must endorse either science or religion, to the exclusion of the other, is not isolated to the highest intellectual levels of each “side” but has been effectively disseminated to society at large. On the first day of an undergraduate anthropology course in which I was enrolled in the Fall of my senior year at Ball State, I began a casual conversation with a classmate sitting next me about our academic majors and future career plans. I mentioned, in passing, that I am a Christian and plan to work vocationally as a minister and a missionary after graduation, to which my classmate responded that this was fine for me, but she preferred a more “scientific” approach to life that included evolution and rejected Creationism. Her response greatly dismayed me, demonstrating that, to her, it is not possible for one to simultaneously be a devoutly religious person and acknowledge scientific facts like evolution.

The fact is that it is unequivocally possible for both to be concurrently true to the same person, as I and a great multitude of others prove. I am a deeply religious Protestant Christian who plans to devote his career to the propagation of the message of the God I serve. Yet, I wholeheartedly and unflinchingly acknowledge the validity of all legitimate scientific endeavors and findings (by “legitimate,” I mean to exclude claims billed as “scientific” but which are not derived via the Scientific Method but by philosophical and unempirical means). Countless conversations like that with my anthropology classmate have led me to reflect on the relationship between religion and science. For nearly a decade I have acknowledged no genuine conflict whatsoever between the two. Yet it is beyond doubt that much of the world vehemently disagrees with assessments like mine. Today, conflict between science and religion is an unassailable reality. Yet this need not be the case. In the past, it *has not* been the case. It is my intention, then, to present my counterargument to the fallacy that science and religion cannot rationally coexist.



## Overview, Goals and Thesis

In our modern cultural and philosophical climate, it may be easy for an effort such as this to devolve into a mere defense of one position over the other. A good example is Timothy Keller's *The Reason for God*. Keller asserts that purely religious, scientifically untestable claims (e.g. the existence of God) cannot rationally be rejected by scientists, because there are no empirical grounds against which to verify or refute such claims.<sup>3</sup> He even recognizes that this fact means that these same religious claims cannot be definitively proven.<sup>4</sup> Yet, he fails to emphasize the reverse to this line of reasoning, which is that those who reject scientific claims purely on the basis of religious belief commit the same fallacy by falsely applying the standards of one to judge the authenticity of the other.

Keller's omission here is not necessarily bad, nor does it invalidate his arguments by any means. His focus on one position may certainly be helpful, in that one can more thoroughly and accurately explain a single position if it is examined in isolation. Yet this approach is also limiting, as it completely removes an entire and salient perspective from the conversation. Respecting the gravity of this limitation, I intend to elucidate the fallacies of both extremes of the present debate. Any argument that rejects the inherent compatibility of religion and science, regardless of the discipline it favors, is flawed and distorts, on some level, what precisely science and religion are. By the same token, it stands to reason that science and religion need not necessarily imply each other; they are not, so to speak, "two sides of one coin." Religions are functionally and essentially philosophical systems, and one may elect to endorse some atheistic philosophical worldview, which is no more or less compatible with science than any religious tradition. Although one may not marshal scientific evidence to disprove a religious claim, one philosophical claim may, by all means, contend with another.

More specifically, I will demonstrate in this essay that the historical conflict between science and religion is an “irresponsible hyperbole,” as one author has termed it,<sup>5</sup> that has been unnecessarily, arbitrarily and artificially created and exacerbated because of a general misunderstanding of the definition and domain of each term. In order to illustrate this, I will begin by briefly summarizing the developmental histories of science and religion, as well as the conflict between them. After documenting the evolution of these two systems, I will present data that demonstrates that their usage in modern arguments to advance notions of incompatibility has distorted them beyond historical recognition. The culmination of this latter section will be my set of guidelines for properly negotiating the compatibility of religion and science, so that one may avoid making inadvertent yet harmful distortions. Properly understood and employed, religion and science do not conflict with each other, and in fact make nice complements.

### **A Brief Disclaimer**

It cannot have escaped the reader that I am writing not only as a religious person but more particularly as a Protestant Christian. One, then, may fairly raise a question about my objectivity, as well as the broader applicability of my position to religious traditions other than my own. Sensitive to these valid concerns, I want to assure the reader of my firm commitment to presenting objective data, and to avoiding overemphasizing the flaws of atheistic dismissals of religion to the neglect of equally flawed theistic dismissals of science. Furthermore, my thesis is not simply that *Christianity* is compatible with science, but that *all religions* are so. At the same time, the reader should understand that it is not possible for any author to fully avoid a degree of internal bias, even if negligible. It is my every intent to employ the utmost academic integrity in this essay, yet let the reader not be troubled if the personality of the author comes through.

## II. A Brief History of the Conflict between Science and Religion

*There have always been people, in every age and in each tradition, who have fought the modernity of their day.*

– Karen Armstrong, *The Battle For God*<sup>1</sup>

*Prima facie*, this section may seem tangential to the discussion at hand. However, taking stock of the evolution of science of religion, separately and collectively, will provide invaluable insight needed to reconcile religion and science in the third chapter. A necessary prerequisite for the incompatibility of these two disciplines is their essential, static rigidity. If this is so, and if we are to understand these two terms according to our modern, post-Enlightenment Euro-American hermeneutic, then they may indeed be in irresolvable conflict. However, the histories of science, religion, and their relatively new rivalry, show that the meanings of these terms are not static, but constantly being refined and reworked, as the cultures that define them develop internally and communicate with each other externally.<sup>2</sup> Examining these histories will demonstrate the limitations of relying on a purely twenty-first century Western understanding of science and religion, which I will argue helps precipitate the unnecessary conflict between religion and science. Doing so prior to a discussion on how a marriage of science and religion may be workable will frame that discussion more appropriately.

### A History of Science

We often associate terms like “science” and “technology” with Enlightenment and Modern advancements and ideas. However, even a cursory history of science like this reveals that this simply is not the case. The origin of scientific thinking cannot be located in any particularly moment or point in space. Humans have been collecting and applying knowledge of

the world around them since the dawn of humanity, and to varying and highly culturally-dependent extents. Though there is an inevitable exchange of technology and information as civilizations interact with each other, history shows that prior to the Colonial Period, when Eurocentric ideas (including Enlightenment and Modernist ideals) were largely inculcated to the rest of the world, individual cultures displayed rather idiosyncratic engagements with science. What I mean by this is that all civilizations experience their own “Dark Ages,” “Renaissances,” “Ages of Enlightenment,” and so on, which may not occur simultaneously across cultures. For example, the Medieval Period was a “Dark Age” for Europe, but a veritable “Enlightenment” for much of the Islamic world. What will become apparent to the reader is how the demonstrable relativity of science detracts from spurious and thoughtless claims that the true meaning of science is found only in a post-Enlightenment world and defined by Western Modernist norms.

As already mentioned, the peoples of the great potamic civilizations of the ancient world were prodigious scientists, making a number of mathematical, medical, astronomical and otherwise scientific discoveries that would not be known to Europe (or in some cases, lost to Europe after the fall of Rome) for hundreds or even thousands of years.<sup>3</sup> Shepherd lists more than fifty significant scientific discoveries and achievements before the advent of Thales of Miletus, regarded by many (including Aristotle) as the first European philosopher.<sup>4</sup> Only five of these are made by Europeans, while the rest are made by various geographically diffuse ancient inhabitants of Egypt, China, India, and Mesopotamia.

Thales of Miletus, the first Greek in recorded history to try to understand the world by observation (as opposed to myth and superstition), introduced a wave of scientific engagement in Europe<sup>5</sup> which would eventually spread from Greece to Italy, and from there to much of Western and Southern Europe and the Mediterranean via Roman conquest. The products of the ensuing

Classical Period include such titans of Western scholarship as Socrates, Plato, Aristotle, Euclid, Archimedes, Galen, Hippocrates, and dozens of others. Tellingly, however, there was never a consensus among the exceptional thinkers of the Classical Period of what precisely counts as legitimate knowledge. Aristotle and Epicurus, siding with Thales, argued that truth about the world must be empirically determinable. Parmenides, Socrates and Plato all thought that truth could only be found in logic and reason, and decidedly not by empirical study. Pliny the Elder's exhaustive compendium on all known knowledge, *Historia Naturalis*, included works of magic.<sup>6</sup> Ironically, the more philosophers tried to uncover the true nature of the world, the more obscure that nature became.

As the Roman Empire began to disintegrate throughout the fifth century of the Common Era, Europe's biggest and most productive intellectual centers faltered, and Europe entered into a Dark Age where few meaningful scientific advancements were made. However, as Europe languished in academic darkness, a new cultural, intellectual and religious movement swept across the Near East, Southwest Asia, Northern Africa, and even parts of Spain. The Islamic empires of the Medieval Period underwent a sort of "Enlightenment" period a millennium prior to the eponymous event in Europe. In addition to their own contributions to mathematics, astronomy, medicine and the arts, they collected, preserved, annotated, criticized and even added to the works of Classical thinkers.<sup>7</sup> Again, unsurprisingly at this point, we see that Medieval Islamic academics disagreed over what could qualify as knowledge. In addition to opposing parties of Aristotelians and Platonists, belief in the veracity of astrological and alchemical procedures was ubiquitous.<sup>8</sup> Despite contributing immensely to humanity's corpus of knowledge, even these thinkers could not agree on the criteria for determining truth.

As the Medieval period wound down, Europe's former fixation with scholarship returned,

laying the groundwork for the intellectual magnates of the Renaissance and the Enlightenment. During this period, Aristotelian empiricism grew increasingly popular in European academic circles, largely thanks to theologian-scientists like Roger Bacon and William of Occam.<sup>9</sup> The idea that empiricism is equivalent to scientific truth became virtually standard in European elite academic circles by the Enlightenment, and a fascination with the observation of the world precipitated such an explosion of technological and scientific advancement arguably not matched since the great Pre-Classical potamic cultures. It is worth noting that many of the most profound scientific discoveries in Europe between the Medieval Period and the Modern Period were made by devout Christians, including those by Galileo, Newton, Mendel, Darwin and others.

Concurrently, Europe's incredible military prowess, facilitated largely by their new-found technological superiority, allowed them to explore and colonize vast swaths of territory across the globe. The young, tenacious and resource-rich United States followed suit after winning its independence from its own European colonial ruler. While it is an overstatement to say that all peoples of the world became subject to Euro-American powers – just as it is ignorant to claim that Europe and America were alone in practicing colonialism – it is a historical reality that the dominant global powers for most of the latter half of the second millennium CE were localized in Europe and America.

In the aftermath of the world wars, colonialism began to fall out of favor as discrete people-groups were either freely granted nation-states by their former colonizers, or won them through war or organized resistance movements. Though the globe has now fractured into scores of independent states, many would argue that American and European dominance is still, if tacitly, in force. Even overlooking their constant military and economic intervention, the imperative of the rest of the world to modernize to match the academic and economic stature of

Euro-America is readily apparent. Though the Colonial Period may have technically ended, in its wake the world is remaking itself in the image of Europe and America.

The substance of this image, at least as it relates to academia, amounts to an *ad absurdum* extension of the brand of scientific empiricism standardized during the Enlightenment. This was largely a reaction to competing religious and secular philosophical systems that held that relying on empiricism alone could provide only limited insight on reality. Evans demonstrates that post-Darwinian anti-religious scientists intentional exaggerated the disparity between science and religion in order to elevate the status of science by juxtaposing it against a ridiculous strawman of religion.<sup>10</sup> He writes further:

The motivation for promoting metaphysical naturalism [in sociology] was a combination of the personal anti-religiosity of the founders [of sociology] and the need to draw very strong intellectual boundaries against the competing group of religious social gospel sociologists. By delegitimizing religious belief writ large, this latter faction could be convincingly defeated and sociology could be a "science," given that natural scientists, with their naturalistic assumptions, controlled what was considered to be legitimate knowledge in universities.<sup>11</sup>

In fairness, the empiricists' concerns were valid. The findings of Copernicus, Galileo and Darwin were all reviled by the religious leaders of the day, and many Christians continue to deny scientifically verified facts like biological evolution and the multi-billion year age of the earth, on the grounds that they contradict scriptural truth.<sup>12</sup> Even more inflaming has been their perception that religious people draw their information about the world from subjective, unverifiable and fundamentally unscientific sources, as if to subjugate science to conjecture. Empiricists, then, began to see religion as a direct challenge to science. In response to this challenge, they unwittingly adapted their understanding of science from a strictly empirical discipline to more of an epistemological system<sup>13</sup> (epistemology is the branch of philosophy concerned with how to properly discern and acquire knowledge). Science became the only valid

means by which one can definitively understand anything. This is an enormously significant development which has defined the present debate between religion and science. Moreland convincingly argues that scientism – this epistemological approach to science – has so pervaded modern Western society that it has become “the intellectual and cultural air we breathe.”<sup>14</sup> This is where we find ourselves today: a world in which claims are treated as flatly wrong until scientifically verified. It is a world where philosophical systems, including religion, are rejected out of hand as outmoded fictions, and “the only ‘natural laws’ are the laws of physics, chemistry, and biology, working blindly and without purpose.”<sup>15</sup> In Chapter III we will work through the fallacies of modern scientism and its categorical and rather unscientific dismissal of religion.

## **A History of Religion**

Before a discussion of the history of religious thought and behavior may be had, the reader must first understand that the entire category of “religion” is inherently subjective and difficult to define. Many attempts to define religion by specific, inflexible criteria fail to apply broadly to everything which we would like to classify as “religion.” This fact is due largely to the historical context behind the development and usage of the term. Our understanding of religion, historically and contemporarily, is directly and inexorably tied to a specific historical and cultural context which has had disproportionated influence over how we understand it today. As Islamic scholar, Carl Ernst, puts it:

The term came into existence at a certain time for certain purposes, and its meaning has changed significantly over the years. Although it may be tempting to regard major concepts such as religion as being universal and applicable in all times and places, they are, in fact, historically conditioned and depend on particular circumstances. We cannot understand religion in a timeless sense or through an abstract definition. Religion can be understood only with respect to context: we have to understand the actors, the time, the place, and the issues in order to avoid making serious mistakes.<sup>16</sup>



The “serious mistake” from which Ernst means to spare us is the fiction that our modern Eurocentric understanding of religion is shared by every culture and religious tradition. How one elects to define or characterize religion may not be (and often is not) the same as the choice of another. Our understanding of the term today is a decidedly novel one, tied inseparably to Modernist and Enlightenment ideals. This is because its roots lie in Europe, where it evolved alongside Christianity, later to be propagated around the globe by European Christian colonizers and missionaries.<sup>17</sup> As with our discussion of the evolution of scientific thought, what follows will elucidate the problem with defining religion only according to modern conceptions of it.

The English word “religion” is a corruption of a Latin loanword, “*religio*,” which itself is probably taken from an earlier Latin word, like “*relegere*” or “*religare*.” *Relegere* means “to read multiple times” or “to meticulously repeat,” and *religare* means “to bind”.<sup>18</sup> Accordingly, the Latin *religio* carried a sense of dutiful and regular effort toward something to which one has committed oneself, a connotation it retained when it was Anglicized as *religion*. “Religion,” then, is an appropriate term for the practices of the Greco-Roman polytheists and Christians who originally adopted it, as their central religious practices at that time revolved around such personal and regular demonstrations of association with the divine. From this understanding comes the enduring notion that religion is concerned chiefly with maximizing beneficial action and perfecting proper practice.<sup>19</sup>

It is worth noting that the connotation of *religio* is very different from terms indigenous to other religious traditions that are rendered “religion” in English. The two best examples are the terms *din* in Islam and *dharma* in Hinduism and related traditions (e.g. Buddhism). When searching for an Islamic analogue to the Euro-Christian *religion*, interpreters and translators turn to the Arabic *din*, which denotes, depending on the situation, either “religion” or “reckoning.”<sup>20</sup>

Even translated as “religion,” however, *din* does not carry the same meaning as *religio*, for the former is derived from an earlier Arabic word, *dāna*, which connotes a sense of indebtedness, paid by adherence to divine instructions.<sup>21</sup> *Din*, then, fits perfectly within an Islamic theological framework – for the Arabic *islam*, simply means “submission” – but does not align precisely with the Christian-minded *religio*. Similarly, the Sanskrit *dharma*, the analogue for “religion” for a number of Indian religious traditions including Hinduism and Buddhism, cannot be properly rendered into English without much being lost in translation. *Dharma* is the state of being entirely in harmony with *ṛta*, the transcendent cosmic order.<sup>22</sup> “*Religio*” does not even begin to capture the depth and complexity of *dharma*’s multifaceted meaning.

That our modern universal terminology for referring to the sacred spheres of life does not fit well outside a Euro-Christian hermeneutic reveals a significant fact about the history of religion, which is that the way we think about religion is hopelessly entangled with European thinking, which was inculcated to the rest of the world through European colonialism. Of course, before the term emerged activity that we would characterize as “religious” existed practically universally across human cultures. Nevertheless, it is critical to emphasize that the world’s understanding of what it means to be “religious” has been **1)** historically relative and dependent on the relevant cultural standards particular to each people-group, and **2)** subject to change in order to accord with the dominant cultural influence in a given region – namely, Europe, for the last few centuries.

An excellent proof of this can be found by tracing the development of the subtle nuances *religio* takes as major ideological shifts occur in Europe. To reiterated an earlier point, when it first emerged, *religio* referred to the practices and attitudes of Roman polytheists. In this age, “religion” was most often understood pluralistically because it was typically a subjective and

private experience.<sup>23</sup> In its original sense, there were not distinct definable “religions” as we know of today, apart from each person’s own idiosyncratic effort to live virtuously and please the gods. This is not to say that there were not commonly practiced, even standardized, myths and rituals which would have been normative to many people within a tradition, but rather that there existed greater operational flexibility and liberty within that tradition than was common during other periods.

When Christianity supplanted traditional polytheism as Rome’s dominant religious system, the usage of “religion” changed slightly. The term referred to essentially the same events and practices, with the exception that it is now only a singular term.<sup>24</sup> It would not be proper in the early centuries of Roman Christendom to refer to multiple religions, because any religion other than that of the Papacy was regarded as a mere distortion of the “true religion.” In other words, there was a right way to “do” religion (namely, Christianity as taught by Church elites), and a wrong way to “do” religion (namely, any other religious practice, whether adherence to non-Christian religions, unauthorized Christian traditions or no religion at all).

The policy of regarding “religion” as a singular entity needed to be revised following the Protestant Reformation. It is no accident that this paradigm shift coincided with the European Enlightenment. All across Europe, well-educated elites, weary of the violent divisiveness and persecution that characterized Catholic and Protestant practice immediately following the Reformation, initiated a general movement toward liberal ideology centered around individualism and the privacy of philosophical choice (including religion). Despite an initial impulse to categorize each other as false corruptions of the True Religion, the various Christian denominations which emerged from the Reformation came to accept each other as essentially true and therefore acceptable.<sup>25</sup> With the shift that “religion” could legitimately refer to multiple

traditions, Christians began to redefine and expand the term to include non-Christian traditions. Although conceptions of “religion” were at first still normative and held Christian traditions alone as purporting “truth,” non-Christian traditions were now considered valid, if untruthful, categories of religion. Gradually, as the liberal Enlightenment ideals of tolerance, privacy and individualism inculcated ever deeper into the Euro-American culture – as well as those within their spheres of influence, which at one point was practically the entire world – the notion that one religion could be “right” and another “wrong” disappeared (at least at the state level), replaced by the novel ideal of the separation of church and state.

Consequently, religious belief has been relegated to the realm of the subjective. In the interest of avoiding interreligious conflict by inciting offense, Euro-American culture has presently adopted an agnostic and relativistic approach to religion. It is no longer proper to classify religious information as *knowledge*, but rather it must be designated as *opinion*.<sup>26</sup> The history from which this policy emerged demonstrates, as I have shown, that it reflects not only a very plain political motive, but also decidedly Post-Enlightenment and Eurocentric values. As I will illustrate in the following sections, it is the shift to this understanding of religion that has precipitated the artificial and wholly unnecessary conflict between religion and science. A return to the paradigm that religious knowledge cannot be disqualified as legitimate knowledge by science would effectively mitigate this conflict in the future.

### **The Conflict in Context**

Before laying out a brief sketch of a very real history of conflict, let me reiterate that conflict between religion and science, historically speaking, is very much the exception and not the rule. The ancients, certainly, seldom saw empirical study of the universe to preclude religious

or supernatural observances. Even the conviction that the natural world should be studied rationally and empirically did not require the rejection of the existence of the supernatural, as Epicurus, Pythagoras and others demonstrate.<sup>27</sup> Moreover, Armstrong argues that the ancients categorized knowledge into two discrete yet equally valid spheres: *logos*, or that which describes the world's matter, and *mythos*, or that which describes the world's meaning. Both were needed to understand life and neither could confirm nor contradict the other.<sup>28</sup> Armstrong's notions of *logos* and *mythos* will be revisited in Chapter III.

As time progressed, history's academics continued to see their religious and scientific convictions as fully compatible, from al-Tabari and Ibn Sina (Avicenna) in the Medieval Islamic world, to Pascal and Leibniz at the dawn of the European Enlightenment, to modern scientists like Srinivasa Ramanujan, Francis Collins, and Mir Masoom Ali. Scores of other examples could be marshalled. Of course, that many examples of religious scientists can be cited does not prove that compatibility was a ubiquitous sentiment, nor does it necessarily disprove contemporary claims of incompatibility. It does, however, demonstrate that countless highly distinguished and respected scholars across time and space have had no difficulty observing religious practices in spite of their academic accomplishments.

Yet the preceding sections of this chapter clearly demonstrate that a very real conflict exists between religion and science in the modern world. Here the research referenced by Evans, a nonreligious sociologist seeking shed new light on the debate, is useful. He cites a study by Besley and Nisbet that shows that the vast majority (85%) of members of the American Association for the Advancement of Science believe that American public is very ignorant of scientific knowledge, much to the detriment of the country, and that the public should be educated in a particular way so that they see the world as the AAAS does.<sup>29</sup> On the face of it,

there is not necessarily anything objectionable about this, but it does show that many scientists, ironically, have the same attitude of philosophical superiority regarding science that many religious conservatives have about their religion. Moreover, Evans cites the work of Ecklund and Scheitle regarding the way those with a stake in the debate perceive the relationship between science and religion. They found that fewer than one fifth of American Catholics and liberal Protestants, and fewer than one third of American Evangelicals, perceive conflict between the two, while more than half of nonreligious respondents perceive such conflict.<sup>30</sup> These statistics are very telling. They show that a remarkable obstinance characterizes much of the non-religious empiricist community, while a willingness to collaborate intellectually characterizes much of the country's religious population.

It is no secret that the Church at large has had a history of reacting strongly against what it perceives to be competing truth claims that may disparage its faith. At least since the Roman Empire became Christianized, the organized and henceforth politically powerful Church has often openly condemned, silenced, exiled, persecuted and executed those who failed to conform to accepted ideology.<sup>31</sup> The schisms between Catholic and Orthodox Christians, and later between Catholic and Protestant Christians, resulted in massive bloodshed, as did various Crusades and inquisitions, all in the name of purging humanity of adherents to faulty doctrine. A succession of smaller-scale acts of religious terror are, wearingly, becoming increasingly common, including, most recently, a disturbing attack on a New Zealand mosque by a white supremacist on March 15, 2019.<sup>32</sup> Of course, history is also full of examples of religiously motivated violence performed by non-Christians, as well as atheistic or non-religious powers. A good example is the *mihna*, a ninth century Abbasid event which Esack (employing a bit of scholarly liberty) compares to the Spanish Inquisition.<sup>33</sup> Muslim theologians subjected to the

*mihna* were required by the Caliph to profess particular ontological beliefs about the Qur'an, and those who refused were persecuted and often killed.<sup>34</sup>

My point here is that by the end of the Medieval Period, religious institutions had already developed a history of contentiously disputing with competing intellectual systems based on accepted points of fact. This contentious attitude was on full display when this sort of conflict occurred between Christian religious institutions and Renaissance and Enlightenment scientists like Copernicus and Galileo. When Darwin's work demonstrated that biological evolution is a scientific fact, further and more enduring conflict ensued between proponents of science and religion, especially Christians, many of whom saw Darwinism as a direct attack on the Creation accounts in the Bible's *Book of Genesis*.

Interestingly, in the nineteenth century, American Christians were quite amenable with science. Science was considered by educated religious people very compatible with religion, and was understood to confirm religious claims made by Jews and Christians.<sup>35</sup> Indeed the two were regarded as two sides of the same coin. Theology studied the supernatural and science the natural, all part of God's creation. Part of this amenability was due to the development of an approach to science developed by Sir Francis Bacon. This so-called "Baconian method" was extremely compatible with unjustifiable religious claims, as it stressed the crucialness of observation and would therefore not reject a claim which could not be observed to be false.<sup>36</sup> Instead, it would resort to agnosticism on the issue and allow other sources which could evaluate the merit of the unobservable assume authority. This supports nicely the dominant view of Protestants at the time, that religion and science were discretely divided into separate categories of truth, each to be examined independently, and both able to contribute to humanity's vault of knowledge. This approach facilitated a considerable degree of harmony between scientific and

religious beliefs, especially among liberal American Protestants. This lasted until until the early 1900s, when atheistic empiricists successfully expelled religion from academic institutions by discrediting the Baconian principles that any observation from any person, if justifiable, has scientific merit, as mentioned earlier.

Their success at rendering science and religion irreconcilable based on conflicting claims of fact has led to the development and propagation to the point of ubiquity of philosophical scientism among the West's cultural and academic elites, as Moreland and Evans both show.<sup>37</sup> Now, religious conservatives are set up as the opponents of science, therefore justifying their ridicule and discredit by nonreligious empiricists. Though it is a demonstrable fact that many religious conservatives do indeed dispute a number of specific scientific claims (recall earlier references to Armstrong and Evans), Evan's data cited earlier in this section demonstrates that for the vast majority of religious Americans, even conservatives, their claim is not that the entirety of science is invalidated by religion, but that, if anything, only a few claims of fact are disproven by scriptural sources. Recall that it is primarily the nonreligious empiricists who are assert incompatibility, and that many of their claims about religiously-minded Americans are strawmen that unduly discredit religious thinking. Evans explains the conflict this way:

It has long been claimed that one source of conflict between science and society is the religious citizens who are inevitably in conflict with science. They are so, the narrative continues, because they are opposed to scientific claims, since religion has a different way of knowing facts about the world. The common conception is that religion ultimately determines truths about the natural world through supernatural revelation and science ultimately determines truth through observation and reason.<sup>38</sup>

He continues:

That some Protestant fundamentalists do not believe scientists' accounts of the age of the Earth really is not the problem, but pretending that it is is comforting for scientists, because it keeps the debate on the scientists' turf of facts.<sup>39</sup>



Moreland assents:

The shift from the ideas that there are several ways of knowing and that theology, science and other fields provide us with genuine knowledge, to the acceptance of scientism . . . was not made on the basis of arguments, facts and discoveries that laypeople just didn't know about yet. Rather, it was merely a *pragmatic sociological shift*. (italics original)<sup>40</sup>

The history of the debate between religion and science, therefore, can be reduced to a relatively recent innovation, originated and exacerbated by elites on both sides. It neither reflects the perceptions of the vast majority of humans across time nor space nor accurately portrays science or religion. The purpose of this innovation was to misrepresent the terms of the debate to favor the dispositions of a select few who directly benefit from the supremacy of one over the other. This, obviously, does humanity a great disservice by subjecting generations to conflict and vitriol based on entirely spurious and self-serving grounds. In the next chapter, I will properly reframe science and religion and show how the two are inherently compatible, as well as what compatibility does and does not indicate.

### III. Reframing the Debate

*I would estimate that about 95% of science and religion are cognitively irrelevant to each other.*

– J.P. Moreland, *Scientism and Secularism*<sup>1</sup>

On the face of it, at least two challenges may be fairly levied against my arguments at this point: 1) if the histories of science and religion show that the definition of each term is entirely context-dependent and constantly evolving, how can I present a definition of these terms (which could be seen as another stage in their respective evolutionary chains) that disqualifies another definition; and, assuming that I can legitimately present such a definition 2) would not mine be another example of the sort of Eurocentric Post-Enlightenment interpretation that I attempt to discredit (as I am an American descended from Europeans who lives after the Enlightenment)? These are fair and deserve my attention.

First, by no means do I claim that I have authority to make some sort of definitive judgement that denies the interpretations of others. Nor do I want to advance my own opinion as the only way to understand science and religion, thereby making them statically definable terms. However, the research I have presented in Chapter II demonstrates that the way we currently understand the disciplines of science and religion has been imposed on them from external sources. Religious (especially European Christian) elites have for centuries cast authentic, verifiable scientific discoveries as corrupted and pernicious fictions, out of sync with religiously authoritative sources. They thereby attempt to subsume science into a religious hermeneutic and define science on terms set not by it but by the religious hegemony. Reciprocally, scientific elites, especially since the acceptance of Darwinian evolution, have portrayed religious thinking and activity as superfluous, retrograde and categorically irrelevant. In doing so, they frame religion on scientific terms, as a mode of fact-collection, vaguely resembling, but hopelessly

methodologically inferior to, science. This effort by some scientists likewise attempts to subsume religion by granting science authority on both scientific and, implicitly, philosophical matters.

To the second potential charge, I would respond that my location in time and space, which I cannot control and from which I cannot be divorced, is largely irrelevant in this instance. Neither the reasoning I employ nor the position I advance is rooted in or reflective of the predominant attitude disseminated by mostly Post-Enlightenment Euro-American thinkers to much of the rest of the world via Colonial (and similar Post-Colonial) channels. This attitude has been held by religious and scientific elites for at least the couple centuries following the end of the Enlightenment, and has been characterized by a general rejection of any kind of compatibility that allows the two to be entirely intellectually reconciled. It is because I argue that just such a configuration of compatibility is rationally possible that I claim that my perspective can be separated, at least in part, from my cultural and temporal context, and located instead in that of my sources, and their sources, etc.. What follows is my justification for my claim that religion and science cannot be rendered incompatible.

## **Reframing Science**

It may be easy to assume that a paper like this will be prone to making unfounded attacks against scientific reasoning, especially considering the religious disposition of the author. I hope that by this point it is apparent that this is decidedly not my position. I fully recognize the veracity of science, as well as its authority to explain and describe natural phenomena just as much as I recognize that of religion to do the same for supernatural phenomena (e.g. the genesis of the universe, which is impossible to explain using science).

Science is an authority on reality in itself. It collects knowledge from observation and

careful study, grounded in the axiom that what can be shown to be true is true. The use of this tautology may be somewhat silly, but the reality that scientific facts are disputed by some because of alleged conflict with religious claims calls for such deliberately, if excessively, meticulous treatment. If I can observe the occurrence of some phenomenon, then I can know with absolute certainty that it has occurred. It has happened and I know that to be true. Yet my unsupported account of its occurrence does not make it true, and provides no objective reason for others to believe that it occurred at all. However, if I can demonstrate its occurrence publicly and repeatedly, then it can be definitively proven true; it has been documented too many times to deny its existence. This is why scientific findings are authoritative. Science does not create, it only records observations.

This system of subjecting a hypothesis (an unproven statement of fact) to thorough examination and experimentation has been expounded upon and codified as a formal process called the Scientific Method. The Scientific Method is the standard against which all hypotheses are verified or refuted. Science, therefore, is perfectly equipped to study and explain everything that can possibly be observed with predictable repetition. Many religious conservatives refuse to admit it, but biological evolution and the multibillion year age of the earth have been thoroughly and conclusively proven to be true by this method, and therefore are factual beyond any doubt. There is no way to rationally argue against this, except by speculating that these conclusions have somehow misapplied the Scientific Method. If an event or idea can be scientifically proven then *it is indisputably true*.

Once again, science is an authority on reality in itself. Yet it cannot not be *the final authority* on reality. This may sound jarring to a Post-Enlightenment audience taught to believe in the authenticity of what many, like Moreland, call “scientism.” We’ve dealt with this term a

little in Chapter II, but here it will be further explored. Moreland, a Protestant theologian and a trained chemist, defines scientism as “the view that the hard sciences alone have the intellectual authority to give us knowledge of reality.”<sup>2</sup> Despite its overwhelming prevalence in popular culture, it is undone using rather nonstrenuous reasoning. Three strong lines of reasoning demonstrate the fallacious nature of scientism, and therefore the limitations of relying on science alone to provide all knowledge. These are the facts that: **1)** there are certain aspects of reality (which I take to refer to that which objectively true, whether observable or not. Implied in this definition is the possibility that some things may not be provable or even comprehensible. Yet some things may be perfectly cogent, yet simply beyond the scope of what science can understand but not beyond the scope of what other disciplines can understand, as we will see) which science is insufficient to explain; **2)** there are modes of reasoning that produce definitive truth without relying the Scientific Method; and **3)** scientism is inherently self-contradictory.

Moreland describes Richard Swinburne’s two categories of information which the Scientific Method is wholly incapable of studying: things that are too odd for science to explain, and things that are too big for science to explain.<sup>3</sup> The first category has several forms, the first of which includes events that do not follow the laws which should describe it, such that those laws must be revised to the point that they are *ad hoc* and ridiculous. He cites a number of examples of patients who recovered from severe medical conditions (e.g. physical deformity, loss of higher brain function, etc.) contrary to the prognosis of physicians – what nonreligious people would call medical anomalies and religious people would call miracles.<sup>4</sup> Of course, that a few diffuse cases exist that do not behave as medical science might predict in no way confirms the suspicion of some religious people that the cause of recovery was divine intervention, but they do present cases where events have occurred that are inexplicable by scientific means.

The second form of events that science cannot explain includes those which, in order to be described on scientific grounds, require an absurd number of correlations to make them feasible. The example Moreland uses for this form is the effort of some researches to connect events that occur in the physical organ of the brain with conscious experiences. He remarks that attempting to create definitive neuroscientific laws that show how neurological events lead to emotional or psychological conditions necessitates “an unruly list of hundreds of thousands, maybe millions, of brute-fact correlations between various mental and physical states,” rendering it “so utterly complex that the theory itself would be undermined.”<sup>5</sup> He uses this same example to show another instance where phenomena cannot be described scientifically, which is when they are by nature contingent, rather than under the operation of some natural law. Scientific laws describe events that are not contingent. They are predictable consequences of antecedent events – consequences which must always and unconditionally occur. There is no causal reason, however, to explain why certain consequent mental states correspond to particular antecedent brain states, making that correspondence indemonstrable using science.<sup>6</sup>

The final form of events too odd for science to explain involve unprecedented incidents that are so unlike any other phenomenon that they cannot be predicted by science. Moreland illustrates this by citing the emergence of human consciousness. He points out that:

According to scientism, the entire history of the universe was a history of strictly physical entities until the very first sentient beings evolved, and prior to the appearance of these beings, there were no sensations thoughts desires, and so forth. And the appearance of consciousness was utterly unpredictable from even exhaustive God-like knowledge of brute matter.<sup>7</sup>

The second broad category of phenomena unexplainable to science – that which is too big for science to explain – is much narrower, and includes that which is inexplicable by scientific means “in principle,” i.e., events of such monumental cosmic proportion that humans cannot

observe or empirically study them.<sup>8</sup> He lists five examples of such phenomena: the origin of the universe, the origin of scientific laws, the origin of consciousness, the fine-tuning of the universe, and what he calls “objectively true laws in morality, rationality and aesthetics.”<sup>9</sup> Even disregarding the fifth item on this list – which perhaps uses the term “objectively” with a degree of liberality inappropriate for a scholar – Moreland leaves the reader with little doubt that some things are indeed unknowable with the use of only science.

The second weakness of scientism is the fact that science is demonstrably not the only method of obtaining authentic knowledge. Mathematics, logic, philosophy, forensics, testimony and personal experience are all legitimate sources of knowledge which cannot be acquired by applying the Scientific Method. To those who have never thought critically about mathematics, my designation of it as unscientific may be confusing, given that it and science are often grouped together. However, a fundamental difference exists between their respective natures, which is that scientific truths are grounded in repeated observation, while mathematical truths are grounded in axiomatic statements. A mathematical calculation is more like deductive reasoning than a scientific experiment.

Take for example, the algebraic equation  $5 + x = 9$ . To solve this equation for the unknown value  $x$  using scientific experimentation, one would need to repeatedly observe instances of various values being added to the number 5, and compare the sums again and again to the number 9 to determine if equality had occurred. After exhaustive tests, one might conclude that when the value of the number 4 is added to the value of the number 5, the sum is equal to the value of the number 9. However, there would be no way to determine if other solutions are possible, because the absence of data is not sufficient to rule out a possibility without the presence of positively refuting data.

Using deductive reasoning based on axiomatic statements, however, leads to the same solution (which we all know to be true), but with greater simplicity and definitude. Because Euclid's third axiom tells us that a pair of equal values subtracted from another pair of equal values yields a new pair of equal values, we can say with certainty that  $5 + x - (5) = 9 - (5)$ . The subtraction of the same value (5) from both sides of the equation does not falsify the equation. That equation can then be simplified to  $x = 4$ , a definite solution produced by intrinsically unscientific, but categorically legitimate, means. Unlike the laborious, cumbersome scientific approach, the use of mathematical axioms requires no research nor collection of data. We know intuitively that they are true simply because truth is their essential nature. Philosophy and logic are also based on axioms, and can similarly be shown to derive truth unscientifically.

Forensic disciplines like history and archaeology provide additional examples of sources of legitimate knowledge that operate independently of the Scientific Method. They must do so, of necessity, as events that have happened in the past are not repeatable, and therefore can no longer be verified by observation and empirical study. That is not to say that two separate events cannot resemble each other (i.e. that history cannot "repeat itself"), but that they can never be identical. The Indianapolis Colts might win a second Super Bowl, (so history may "repeat itself"), but even if it is in Miami and against the Chicago Bears, it would axiomatically be a different event than Super Bowl XLI (in 2007). This somewhat silly example reveals a very real issue for proponents of scientism, which is that if scientism is correct, the existence of historical places, events, ideas and individuals cannot be taken as facts, because they are not repeatable and therefore not empirically verifiable. If scientism is correct, then it is not possible to prove that, say, Charles Darwin ever existed, nor that he authored *On the Origin of Species*, nor even that his paradigm-altering study of finches in the Galapagos actually took place. Ruling out the testimony



of witnesses provides similar issues. The facts that forensic data and eyewitness testimonies are considered admissible evidence in courts of law is a very strong proof that science cannot be seen as the only authentic source of knowledge.

If however, these first two lines of reasoning are somehow unconvincing, the third should conclusively discredit scientism: scientism is intrinsically a self-defeating system. Moreland gives three criteria to determine if a statement is self-refuting: **1)** the statement includes a mechanism for determining truth; **2)** the statement can be tested by that mechanism; and **3)** the statement is proven by its own mechanism to be false.<sup>10</sup> These three criteria are demonstrably applicable to scientism. Scientism makes a statement about how to determine truth, namely that a claim can only be true if empirically verifiable; it can be tested by this mechanism, because it claims to be truthful; finally the mechanism it provides proves itself to be false, because the veracity of scientism is not empirically determinable. It is an epistemological activity, not a scientific one, for no amount of observation or study will ever be able to objectively prove its principle claims. These proofs must come from philosophical debates. Scientism proves itself to be false, and therefore its claim that science is the only way to verify truth-claims cannot possibly be true.

Conclusions made through systematic and empirical examination and experimentation can be trusted beyond all doubt. Unsupported allegations that provable scientific facts are false can be dismissed out of hand. Those who make such allegations misunderstand science, wrongly believing it to be incompatible with religious beliefs. However, it is also a verifiable fact that science alone is wholly insufficient to explain and describe all knowledge. Proponents of scientism misunderstand the nature of science just as much as religious conservatives who attempt to refute scientific facts. Taken with a proper understanding of religion, this approach to determining what science is and is not will show how the two are inherently compatible.

## Reframing Religion

In the Fall of 2018, I and a couple friends were discussing sports via a social media group chat. I made what must have been a wildly ridiculous prediction (the substance of which I cannot recall), to which one friend, who is not religious, responded: “Blind faith is for religion, not sports.” His statement deeply puzzled me. I, a devout Christian, had never considered any component of my faith “blind” in any way. Nor do I now. My Christian faith is the result of accrued personal experiences that confirm to me the veracity of my faith and its truth-claims. This confirmation, naturally, is not something that can be scientifically verified or repeated, yet, simultaneously, it is something I can profess to be true for the very same reason that science cannot verify it: the nature of the data, which is personal experience. This reveals the principle strength of religious thinking, which is that religion can support modes of data that science cannot (the reverse is also true – science can support modes of data unintelligible to religion).

It is worth mentioning that Moreland notes that his five problems “too big” for science to explain are perfectly explainable with religion.<sup>11</sup> Keller provides a list of what he calls “Clues of God,” which includes items very similar to Moreland’s examples: the Big Bang, the fine-tuning of the universe, the consistency of scientific laws of nature, and the existence and identifiability of innate beauty.<sup>12</sup> Of course, Keller fully acknowledges that each “clue” of God’s existence is rationally avoidable, as well as the fact that the existence of Someone or Something we might call “God” in no way substantiates the beliefs of particular religious systems, like his own Presbyterian Christianity. However, Keller argues that the presence of so many compelling, if inconclusive, signs of God’s existence compared to the presence of shockingly few compelling arguments against God’s existence, makes it irrational to *disbelieve* in the existence of some transcendent Power, and ridiculous to dismiss it out of hand. His logic is persuasive, and yet the

prevailing paradigm still seems to be that religious belief is an act of irrational “blind faith.”

What are the implications of describing religious faith as “blind?” Principally, it implies that the true nature of the world is imperceptible to religion. It betrays a belief that religion is fundamentally unequipped to explore truth, and therefore must rely on uncritical, thoughtless conjecture. While it would be ignorant to assert that no religious person has ever relied or espoused reliance on specifically blind faith, it is equally ignorant to say that reliance on such has been the dominant or even a significant paradigm throughout the history of religious thought. Religious people have a rich, time-tested history of not only theoretically claiming that their convictions are truthful, but also practically marshalling evidence to demonstrate their veracity.

Muslims, for example, argue that the Qur’an recited aloud in Arabic is so inimitably beautiful that it must be divine, and that many non-Muslims have converted to Islam simply after hearing the Qur’an.<sup>13</sup> Muslims can readily evaluate and compare the aesthetic qualities of known human recitations against those of the Qur’an, and come to the conclusion that the former is no match for the latter. Indeed, the Qur’an itself declares that unbelievers “will not desist until the clear proof comes to them, a messenger from God reciting scriptures purified.”<sup>14</sup> Clearly, these sources are not interested in conjecture, but in the collection and examination of data.

Moreover, the authenticity of extra-Qur’anic texts considered authoritative sources of Islamic doctrine (these sources are called *hadith* in Arabic) is demonstrated by an incredibly systematic and thorough vetting process. This process consists of intensely scrutinizing every aspect of an account, and casting them into categories of reliability accordingly.<sup>15</sup> This process is largely dependent on an assessment of the account’s *isnad*, or “chain of transmission.” The *isnad* of a hadith indicates through whom the recorder of the account came to hear of it. Before a hadith can be authoritatively certified as a probable and reliable account, it must be subjected to

a grueling examination of the people alleged in the *isnad* to have passed it on. Depending on the trustworthiness of each person in the chain, the plausibility of each transmissive connection and the degree to which the message was compatible with known revelations of Muhammad, the account could be systematically and convincingly demonstrated to be reliable or not. Thus, it is evidence of authenticity, not uncritical belief, that leads Muslims to accept religious doctrine.

The Bible provides additional examples of confessions of demonstrable proof of religious convictions. The Old Testament speaks continuously about God's faithfulness – that is, God's characteristic trustworthiness in fulfilling promises. Significantly, biblical writers who call on this attribute is frequently refer to previous instances where God has remained faithful as proofs that God will continue to be so, as in Psalm 106:21 and 1 Kings 8:56. In Malachi 3:10, God challenges the reader to test God's faithfulness in providing for the physical needs of those who offer a portion of their wealth to the Temple. In the New Testament, the Pharisees demand miraculous signs from Jesus to prove his divine authority to challenge their interpretations of scripture and fierce debate ensues among them when they witness Jesus perform such miracles.<sup>16</sup>

Throngs of people are often convinced of the authority of Jesus and his disciples only after a miracle is performed, and the disciple Thomas would only believe his fellows' claim that Jesus had been resurrected from the dead after seeing Jesus alive with puncture marks in hands and feet to show that he had been crucified.<sup>17</sup> Timothy Keller, a Presbyterian pastor, calls Jesus "the ultimate proof for the existence of God."<sup>18</sup> There is a reason Christians use jargon like "testimony" and "witness" to refer to their personal interaction with religious matters, which is that they understand these experiences to be authenticated by reliable, trustworthy eyewitnesses. Whether or not this seems intelligible outside a Christian context, it is clear that Christians have largely seen their religious beliefs as rational conclusions based on observation, and not

simpleminded “blind faith.”

Of course, none of this by any means proves that religious claims like those presented above are true. Proving them true is not the point, as we will see. What these do show is that religious people are not idiots who believe claims of fact without evidence, nor do they profess to do so. They don’t justify core convictions with speculation or transparently untrustworthy sources, but through carefully collected and analyzed evidence. Their convictions are seen as authentic, legitimate, verifiable truths.

Taken to extreme proportions, this understanding of faith – that it involves referring to trustworthy sources for verifiable truth – can contribute to the tension between religion and science. Christians far too often treat the Bible as a history or science textbook, causing claims of fact to carry religious significance. When scientific evidence disagrees with these fact claims, it is taken as a challenge of the religion altogether. Mostly flowing from a commendable sense of trust in scriptural language, many religious conservatives push back all the more forcefully in the face of such challenges, devolving the conflict into an endless cycle.

A different approach to religion, however, may be enough to interrupt this cycle. It has been sufficiently shown that the conflict between religion and science is a relatively recent innovation, brought about by misrepresentations of the two which have endured and more deeply inculcated these misconceptions. As Karen Armstrong puts it:

Western civilization has changed the world. Nothing – including religion – can ever be the same again. All over the globe, people have been struggling with these new conditions and have been forced to reassess their religious traditions, which were designed for an entirely different type of society.<sup>19</sup>

Recall Armstrong’s distinction between engagement with natural phenomena (*logos*) and engagement with supernatural phenomena (*mythos*). There is a clear discrepancy between the two, and they are not to be confused. As we have seen in the earlier section, “Reframing

Science,” myth cannot be proven false because there is no way to study it empirically to confirm the hypothesis that it is false. Myth is not the same as fiction. Yet, by the same token, myth cannot possibly be verified. There is simply no way to confirm that unrepeatable, unobservable events, even if true, ever took place. However, the veracity of myth is not the point; if it were, there would be no real difference between *logos* and *mythos*. Even if myth is insufficient to perform the function of science – namely, collecting knowledge of the natural world – science is equally insufficient to perform the function of myth – namely, giving *meaning* to the natural world, inaccessible when relying purely on empirical analysis.<sup>20</sup>

The purpose of accounts like the Noachian Flood, or Muhammad’s Night Journey (*Isra’*) to Jerusalem, or the ancient war between Rama and Ravana is not to give literal accounts of historical events, but to convey and illustrate principles with tremendous philosophical (therefore outside the bounds of science) import. To treat them any other way is to not only to grossly misapply them, but also to strip them of their incredible value. If myth is fact, not meaning, from where are we supposed to find any semblance of significance? Meaning would be utterly indeterminable. To return to the earlier understanding of religion as myth – neither fact nor fiction, but something that transcends that dichotomy entirely – is to return the discipline of religion to its rightful place in life, where it can have real and inimitable value and exist in perfect harmony with scientific reasoning.

### **Negotiating Compatibility**

Recall that most of the conflict between the science and religion occurs when one of the two wrongfully encroaches on the domain of the other. We have seen, however, that religion and science, when done properly, perform fundamentally different functions, and therefore cannot be

legitimately applied beyond their respective fields of authority. The two simply do not study the same types of things, and therefore cannot in any way prove, disprove, affirm or attack the conclusions of the other. By their respective natures, they lack the methodological means to render such judgments of or against each other. It is on these grounds that I make my claim that science and religion are axiomatically compatible.

But it remains ambiguous what precisely it means that the two are compatible. Clearly, neither can validate nor invalidate the other – they can have no meaningful dialogue between each other, because they lack the means to understand each other. Therefore, it would be somewhat impetuous, even foolishly idealistic, to claim that science and religion are intrinsically and necessarily complimentary. Such a statement could be conclusively refuted by turning to examples of agnostics and atheists who are able to reconcile their personal, secular philosophical (and therefore empirically unprovable) convictions with science just as easily as theists should be able to reconcile their religious convictions with science. This ambiguity calls for a clarification of what exactly “compatibility” does and does not imply regarding science and religion. In this case, the data I have presented here demonstrate that there is no necessary **1)** contradiction, **2)** incorporation, or **3)** contingency between the two.

The first has already been expounded upon with special thoroughness in this chapter. Yet, I will briefly summarize my earlier points for the sake of clarity. Science depends on observable data in order to reach conclusions, and cannot operate in the absence of such data. It is well suited to describe the natural, observable world, yet incapable of describing what can be known to be true but not conclusively and demonstrably verifiable. Religion, on the other hand, gives meaning to existence by appealing to that which science cannot comprehend. It transcends such

categories as fact and fiction – which are strictly within the realm of science – and therefore can neither be proven false nor true.

Once one accepts that religion and science are compatible, then it may be tempting compartmentalize one within the other. I will admit that in my experience the religious are more prone to committing this transgression than the nonreligious, typically following Augustine's line of reasoning that "wherever truth may be found, it belongs to [the] Master."<sup>21</sup> Now, this is a perfectly acceptable perspective to take, and, being unverifiable, is not open to refutation by science. Yet those who profess this position must do so with caution. Tracing the root of all truth to a religious conviction is a philosophical statement, not a scientific one. Therefore, one may believe, along with Augustine, that God is the original source of all knowledge, but that cannot be mistaken as equivalent to subsuming science within religion. Regardless of the source of scientific truth (by nature an epistemological query, and not a scientific one), religion is still wholly unequipped to study the natural world in the way science can. Similarly, one cannot claim that religious truth can be subsumed by science. This would be tantamount to scientism, which was shown to be a self-defeating fallacy earlier in this chapter. Scholar of religion Wilfred Cantwell Smith calls religion "poetry plus, not science minus."<sup>22</sup> Religion is not reductionist science, nor is the reverse true. The sheer fact that science and religion study two discrete, nonintersecting bodies of knowledge means that one cannot be incorporated into the other.

The final potential erroneous conclusion I wish to dispel is that, if science and religion are compatible, then they must necessarily imply each other – in other words, that they are "two sides of a coin." Compatibility may certainly lead one to conclude that both are sources of truth – and that is definitively the position of the author – but it is critical to understand that this conclusion is not *necessary*. Compatibility does not mean contingency. It is perfectly rationally



coherent to live without embracing a particular religious tradition, as an endless cadre of agnostics and atheists will attest. Religion is really a form of philosophy. Everyone necessarily adheres to some sort of system of philosophical belief, even if they are unaware of it. They might refer to it as their “moral code” or “intuition” or “the way I was raised,” etc. Regardless of terminology, everyone conceptualizes the world in one way or another. Some of these we might designate as “secular” and others “religious.” Science and religion cannot necessitate each other, yet because there is no inherent conflict between them they are innately compatible.

In antiquity, *mythos* and *logos* were both regarded as indispensable, yet neither could subordinate the other – “They had separate jobs to do.”<sup>23</sup> There is no reason the same cannot be true today. Religion is not equipped to make scientific claims of fact, and so it should not. This does not mean that religion should be treated as false. Not only are atheistic caricatures of religion that make it out to be uncritical conjecture themselves demonstrably false, but science is also wholly unequipped to make unprovable subjective judgements like refutations of religion. Rather, science and religion occupy two separate, mutually exclusive modes of understanding the world. Returning to this paradigm is crucial. Religious conservatives and nonreligious liberals are divided against each other needlessly, because we have abandoned the antiquated yet still valid understanding of *logos* and *mythos*. Neither can be used to contradict the other, because both rely on completely different and divergent modes of information, and have completely different function in the human life.

## IV. Conclusion

*Science and religion do not need each other to function, but that doesn't imply that they can't benefit from each other.*

– David Destano, “What Science can Learn from Religion”<sup>1</sup>

We started this adventure by questioning the meaning of “truth,” and I dare say that we are little closer to reaching a definitive answer to Governor Pilate’s question than when we began. What this study has shown is that the nature of truth is mired in ambiguities and open-ended questions that may be impossible to answer with absolute certainty. A number of individuals, mostly with good intentions, have tried to manipulate ways of knowing and interacting with truth, like science and religion, in an attempt to establish an all-encompassing system of acquiring and understanding truth in its totality. All of these efforts have failed.

Neither science nor religion is capable of fully understanding the mysteries of existence. This is not because both are needed to comprehend the universe, nor are they inferior to some other source of knowledge, but because they and every other approach to knowing the world are fundamentally divergent by their nature. Science and religion are neither interested in nor capable of answering the same questions. Religion provides no meaningful mechanism for studying the physical universe. Science, on the other hand, is designed to do just this. It has been refined by thousands and thousands of years human examination and analysis – one might say that the entire discipline of science itself can be thought of as a macroscopic science experiment, focused on finding the best way to learn about the natural world. The Scientific Method gives scientists an unassailable mechanism to discover the true nature of the physical universe, by relying only on what can be observed and shown to be true. What science can demonstrate to be true beyond doubt can and should be accepted as truth.

Scientific analysis, however, fails when observation is not possible. Religion, on the contrary, inhabits a realm of cognition where empirical, observable data is not needed to find truth. And it is not alone here, but joined also by other categories of philosophy, like logic and mathematics. In this realm, truth is not necessarily observable, but intrinsically knowable or discoverable. That claims made by religion may not be empirically corroborated certainly does not invalidate the veracity of such unverifiable claims. It only means that they may not be confirmed by scientific investigation. It would be impetuous, careless, and entirely unreasonable (indeed, unscientific!) to assume that the unverifiability of a claim invalidates it. That something has not been, or even may not be, proven emphatically *does not* mean it has been disproven.

I set out to show that the idea that religion and science are intellectually incompatible is a demonstrable and transparent fiction. I believe I have accomplished this goal. In Chapter II, the essential and culturally-contingent flexibility of what counted as “science” and “religion” was put on display. Examining the historical development of each term revealed that the alteration of their respective definitions to contradict the other was a deliberate and inappropriate effort by elites to eliminate intellectual competition. The result was that science and religion were rendered unrecognizable, forced to awkwardly ask questions they were not designed to explore and are not capable of answering. Returning science and religion to their proper, respective spheres shows the conflict between the two to be an unfounded artificiality. There is not, and never has been, any genuine intellectual conflict between science and religion.

### **A Vision for the Future**

I have been told by a religious mentor of mine that a lesson is a waste of time unless it can be applied to the immediate lives of those who hear it. With that in mind, I want to close this

essay by expressing my hopes for how the message communicated here can positively affect the lives of those who hear it.

The notion that science and religion are at odds is not simply false. It is a destructive lie capable of dividing peoples and crushing individuals. I have seen people slip into intense depression because “science” had convinced them that their religion is false and now life has no meaning. I have seen others wracked with worlds of psychological and intellectual torture because they believe standing strong in their faith meant sacrificing appeals to reason, and enduring the social humiliation that would inevitably result. How we choose to approach the relationship between religion and science has real and serious consequences. At stake are not simply abstract philosophical positions, but the most intimate and personal convictions of real human beings.

Pope John Paul II said, "Science can purify religion from error and superstition; religion can purify science from idolatry and false absolutes."<sup>2</sup> I love science, and I love religion. It pains me to see them pitted against each other – and actual people pitted against each other, by extension. What pains me the most is that this division is completely unnecessary, and yet it seems to become further ingrained in society’s collective mind with each passing day. What it will take to dispel the fiction that science and religion are intrinsically in conflict with each other is the willingness of people like you – the reader – to set aside preconceived biases and deliberately examine the facts of the debate.

Despite what we have been taught to believe – despite what we may want to believe – there are absolutely no reasonable grounds to claim that science and religion are anything but fully intellectually compatible. Neither gives one a complete picture of reality, and much can be gained when the two are used in tandem. I eagerly look forward to the day when the society at

large embraces once again what it used to understand implicitly to be true: science cannot prove or disprove religion, and religion cannot prove or disprove science. The two ask fundamentally different questions, and to turn to both rather than one or the other is to find more complete and satisfying answers, and to achieve a better understanding of the way the world works.

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## V. Appendix

### I. Introduction

1. Walter Shepherd, *Outline History of Science* (New York City: Philosophical Library, Inc., 1968), 7-12.
2. Ibid., 15
3. Timothy Keller, *The Reason for God: Belief in an Age of Skepticism* (New York City: Penguin Books, 2009), 88. This is a reference to a quote on this page: “It is one thing to say that science is only equipped to test for natural causes and cannot speak to any others. It is quite another to insist that science proves that no other causes could possibly exist.” This is the thesis for the chapter in which it is located, entitled, “Science has Disproven Christianity,” in which he refutes the claim made by the chapter’s title.
4. Ibid., 146
5. J. P. Moreland, *Scientism and Secularism: Learning to Respond to a Dangerous Ideology* (Wheaton, IL: Crossway, 2018), 175.

### II. A Brief History of the Conflict between Science and Religion

1. Karen Armstrong, *The Battle for God* (New York City: Random House Inc., 2000), xi.
2. John Evans, *Morals not Knowledge: Recasting the Contemporary U.S. Conflict between Religion and Science* (Oakland, CA: University of California Press, 2018), 49.
3. Shepherd, *History of Science*, gives several such examples, including: the Babylonians knew of Pythagorean triples a thousand years before Pythagoras himself (10, 14); ancient Indian civilizations around the 15<sup>th</sup> century BCE possessed humanity’s most accurate record of the lunar cycle for more than three thousand years (10); Chinese mathematicians made many mathematical discoveries half a millennium before the Greeks discovered them independently (11), etc.
4. Ibid, 13; Shepherd’s account of Thales’ contribution to science is the fifty-fifth entry in this text. He calls Thales “one of the first Europeans to enquire about nature without reference to myths and superstitions,” (13). Patricia O’Grady, *Thales of Miletus* (Abington, Oxon, England: Routledge, Taylor & Francis Group, 2016), endorses this claim, adding that even Aristotle considered Thales “the founder of the school of natural philosophy,” (2).
5. O’Grady, *Thales*, 2: “one man’s [Thales’] thoughts probed the phenomena of nature and initiated the first western enlightenment.”
6. Shepherd, *History of Science*. For Aristotle’s position, 20; Epicurus, 22; Parmenides, 16; Socrates, 19; Plato, 16; Pliny the Elder, 29.
7. Ibid. For Muslim contributors to Mathematics, see Shepherd’s note that during the 9<sup>th</sup> and 10<sup>th</sup> centuries, CE, “Arabs acquired all the mathematical knowledge of the ancient Greeks, and added to it,” 36; for astronomy, al-Battani’s calculations of solar altitudes, 37; for medicine, al-Tabari’s *Paradise of Wisdom*, 36; the arts, al-Farabi on music. Ibn Sina (Avicenna) contributed to all of these fields as well as others (39). For examples of Muslim scholars collecting ancient Greek works, Hakam II’s library, 38; for preserved, Caliph Ma’mun’s mandate that a number of Greek



- treatises be translated in Arabic, 37; for annotated, al-Nairizi on Ptolemy and Euclid, 37 ; for criticized, al-Razi on Galen, 37; for additions to Greek works, al-Sufi, 37.
8. Ibid. Al-Kindi, an Aristotelian thinker, contested Platonic favor of philosophy over empirical evidence, as well as the legitimacy of alchemy, both of which were widespread at the time (37).
  9. Ibid., 43, 45.
  10. Evan, *Morals not Knowledge*, 27.
  11. Ibid., 61.
  12. Armstrong, *Battle for God*, ix.
  13. Evans, *Morals not Knowledge*, 92; cf. Moreland, *Scientism and Secularism*, 33.
  14. Moreland, *Scientism and Secularism*, 26.
  15. James Rachels, *The Elements of Moral Philosophy* (Boston: McGraw Hill, 1999), 61.
  16. Carl Ernst, *Following Muhammad: Rethinking Islam in the contemporary world*. (Chapel Hill, NC: University of North Carolina Press, 2003), 38.
  17. Ibid., 38.
  18. Joseph Lombard, "The Quran in Translation," in *The Study Qur'an: A New Translation and Commentary*, eds Seyyed Hossein Nasr, Caner K. Dagli, Maria Massi Dadake, Joseph Lombard, and Mohammed Rustom, 1601-1606 (New York City: HarperCollins Publishing, 2015), 1605 (cf. Ernst, *Following Muhammad*, 39).
  19. Ernst, *Following Muhammad*, 39.
  20. Michael Sells, *Approaching the Qur'an* (Ashland, OR: White Cloud Press, 1999), 129.
  21. Lombard, "The Quran in Translation, 1605
  22. Hilary Rodrigues, *Introducing Hinduism*, 2nd ed. (London, England & New York City: Routledge: Taylor & Francis Group, 2016), 69.
  23. Ernst, *Following Muhammad*, 39
  24. Ibid., 39.
  25. Ibid., 40.
  26. Moreland, *Scientism and Secularism*, 33.
  27. For Epicurus: David Konstan, "Epicurus." In *The Stanford Encyclopedia of Philosophy*, Summer 2018 edition, ed. Edward N. Zalta (Metaphysics Research Lab, Stanford University, 2018), accessible at: <https://plato.stanford.edu/archives/sum2018/entries/epicurus/>. For Pythagoras: Shepherd, *History of Science*, 14-15.
  28. Armstrong, *Battle for God*, xiv.
  29. Evans, *Morals not Knowledge*, 18.
  30. Ibid., 102.
  31. J. M. Berger, *Extremism* (Cambridge, MA: Massachusetts Institute of Technology Press, 2018), 64-69.
  32. Bianca Britton, "What we know: How the New Zealand terror attack Unfolded." (*CNN*, March 16, 2019), accessible at: <https://www.cnn.com/2019/03/15/asia/new-zealand-christchurch-attack-what-we-know-intl/index.html>.
  33. Farid Esack, *The Qur'an: Beginner's Guide* (Oxford, England: Oneworld Publications, 2009), 127.

34. Ibid., 129.
35. Evans, *Morals not Knowledge*, 88-92.
36. Ibid., 91.
37. Evans, *Morals not Knowledge*, 61; Moreland, *Scientism and Secularism*, 26.
38. Evans, *Morals not Knowledge*, 160
39. Ibid., 165
40. Moreland, *Scientism and Secularism*, 48.

### III. Reframing the Debate

1. Moreland, *Scientism and Secularism*, 173.
2. Ibid., 23.
3. Ibid., 129
4. Ibid., 130
5. Ibid., 131
6. Ibid., 134
7. Ibid., 132
8. Ibid., 134
9. Ibid., 155
10. Ibid., 50
11. Ibid., 135
12. Keller, *The Reason for God*. Keller's notion of "Clues of God" is introduced on 131, on which the eponymous chapter begins, continuing until 147. He discusses the Big Bang beginning on 132, fine-tuning on 134, regularity of scientific laws on 136 and intrinsic beauty on 137.
13. Sells, *Approaching the Qur'an*, 2, and Ingrid Mattson, *The Story of the Qur'an: It's History and Place in Muslim Life*, 2<sup>nd</sup> ed. (Chichester, West Sussex, England: Wiley-Blackwell Publishing, 2013), 36, both make this point.
14. *The Study Qur'an: A New Translation and Commentary*, eds. Seyyed Hossein Nasr, et. all, (New York City: HarperCollins Publishing, 2015), 1542. This is an English translation of Sura 98:1-2. The reader should be careful to note the difference between the Qur'an (lit. "the Recitation") and foreign translations of the Qur'an. Once translated out of the original Arabic, the text is no longer the speech Muhammad recited (because he did so in Arabic), and therefore translations should be considered interpretations of the Qur'an, and not the Qur'an proper.
15. Mattson, *The Story of the Qur'an*, 29-30.
16. In Matthew 12:28, a group of Pharisees demand that Jesus provide a divine indication that he has the authority to oppose their practices; in John 9:16, Jesus miraculously enables a blind beggar to see, a sign which is noticed by many people including the Jewish leaders (many of whom were Pharisees). Some of them rejected the legitimacy of miracle, while others questioned whether it could be dismissed.
17. In Matthew 4:23-25, Jesus' public ministry in Galilee, which involved performing miracles, earned him great renown in the region, and the common people flocked to him *en masse* to

benefit from these miracles; In the verses immediately prior to John 20:25, the resurrected Jesus appears to a number of his followers, except one named Thomas who was not present at one of these appearances. Thomas expresses disbelief in the accounts of some of the other disciples, until Jesus appears to him personally and shows him wounds in his hands and side, proving to Thomas that he was indeed actually crucified, dead, and raised from the dead.

18. Keller, *The Reason for God*, 22.

19. Armstrong, *Battle for God*, xii

20. Ibid., xiv.

21. Quoted in Evans, *Morals not Knowledge*, 40).

22. Wilfred Cantwell Smith, *What is Scripture? A Comparative Approach* (Minneapolis, MN: Fortress Press, 1993), 66.

23. Armstrong, *Battle for God*, xv.

#### **IV. Conclusion**

1. David Destano, “What can Science learn from Religion: Hostility toward Spiritual Traditions may be Hampering Empirical Inquiry” (*New York Times*, February 1, 2019). This article is accessible at: <https://www.nytimes.com/2019/02/01/opinion/sunday/science-religion.html>

2. Quoted in Evans, *Morals not Knowledge*, 88. Evans himself quotes here: James L. Heft, “Catholicism and Science: Renewing the Conversation” (*Journal of Ecumenical Studies* 39, no. 3-4, 2002) 377.